FIG. 1

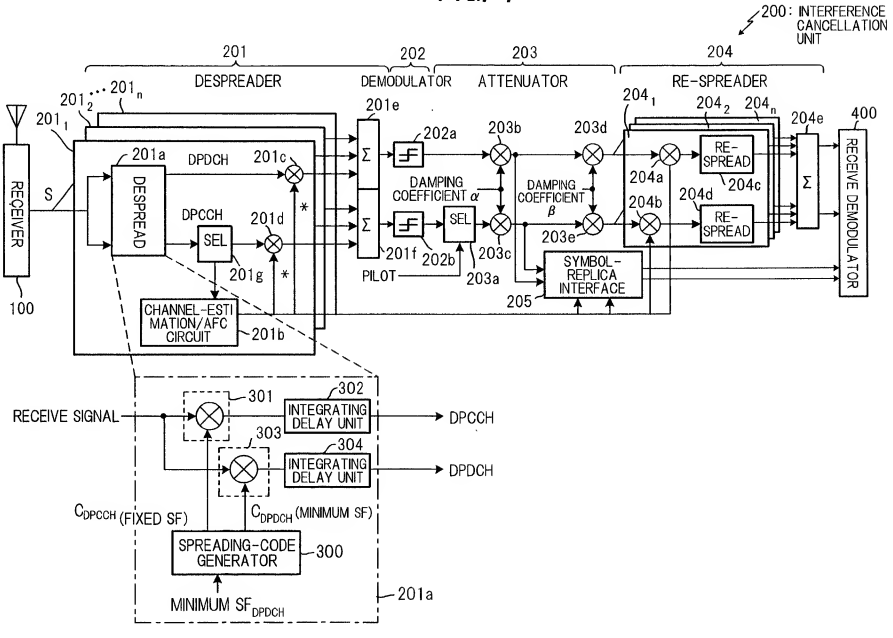
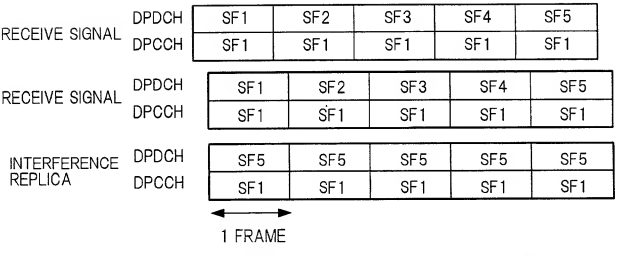

200: INTERFERENCE CANCELLATION UNIT
201
DESPREADER
202
DEMODULATOR
203
ATTENUATOR
204
RE-SPREADER
RECEIVER
100
S
DESPREAD
DPDCH
DPCCH
SEL
CHANNEL-ESTIMATION/AFC CIRCUIT
DAMPING COEFFICIENT α
DAMPING COEFFICIENT β
PILOT
SYMBOL-REPLICA INTERFACE
205
RE-SPREAD
RECEIVE DEMODULATOR
400
RECEIVE SIGNAL
INTEGRATING DELAY UNIT
SPREADING-CODE GENERATOR
300
MINIMUM SF DPDCH

FIG. 2



SUBSTITUTE SHEET (RULE 26)

TOKEN STEERDOT

FIG. 3

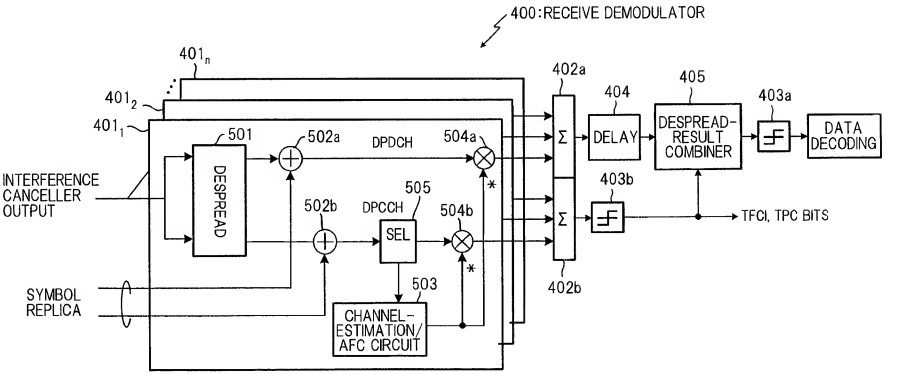


FIG. 4

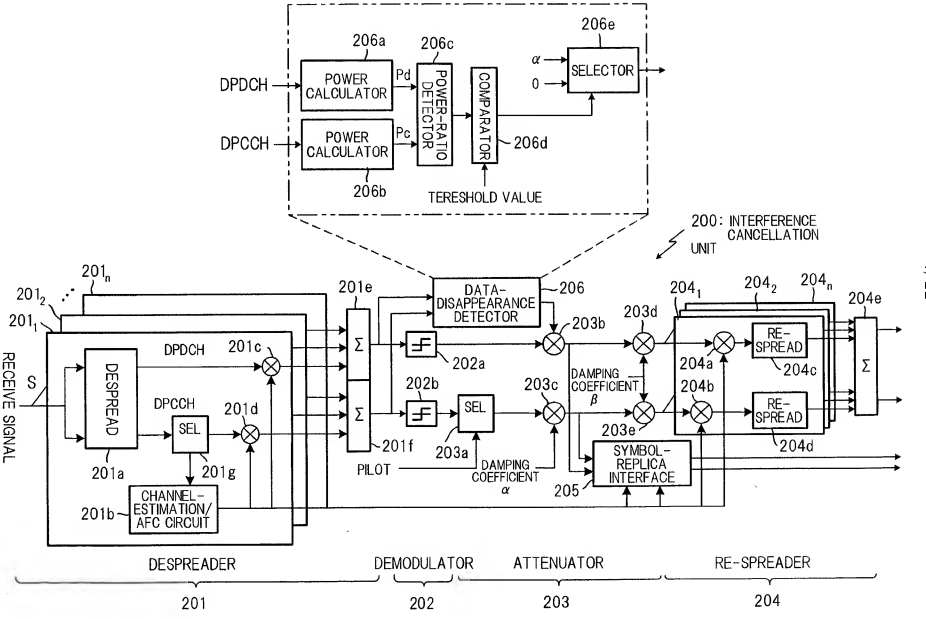
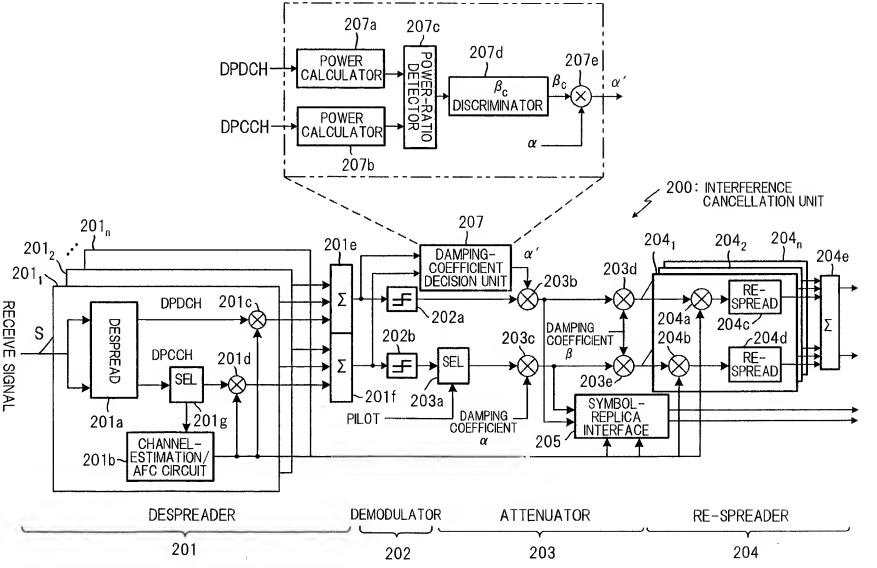

206a
206c
206e
DPDCH
POWER CALCULATOR
Pd
POWER-RATIO DETECTOR
COMPARATOR
α
0
SELECTOR
DPCCH
POWER CALCULATOR
Pc
206b
TERESHOLD VALUE
206d
200: INTERFERENCE CANCELLATION UNIT
RECEIVE SIGNAL
S
DESPREAD
DPDCH
DPCCH
SEL
201a
201g
201b
CHANNEL-ESTIMATION/AFC CIRCUIT
201c
201d
201e
201f
PILOT
DATA-DISAPPEARANCE DETECTOR
206
202a
202b
203a
DAMPING COEFFICIENT α
203b
203c
DAMPING COEFFICIENT β
203d
203e
205
SYMBOL-REPLICA INTERFACE
RE-SPREAD
204a
204b
204c
204d
204e
DESPREADER
DEMODULATOR
ATTENUATOR
RE-SPREADER
201
202
203
204

FIG. 5


207a
207c
DPDCH
POWER CALCULATOR
POWER-RATIO DETECTOR
207d
β_c DISCRIMINATOR
207e
β_c
α'
DPCCH
POWER CALCULATOR
α
207b
200: INTERFERENCE CANCELLATION UNIT
207
201_n
201_2
201_1
201e
DAMPING-COEFFICIENT DECISION UNIT
α'
204_1
204_2
204_n
204e
203d
203b
RE-SPREAD
RECEIVE SIGNAL
S
DESPREAD
DPDCH
201c
202a
204a
204c
Σ
DAMPING COEFFICIENT β
DPCCH
SEL
201d
202b
SEL
203c
204b
204d
RE-SPREAD
203e
201a
201g
203a
SYMBOL-REPLICA INTERFACE
CHANNEL-ESTIMATION/AFC CIRCUIT
201b
201f
PILOT
DAMPING COEFFICIENT α
205
DESPREADER
DEMODULATOR
ATTENUATOR
RE-SPREADER
201
202
203
204

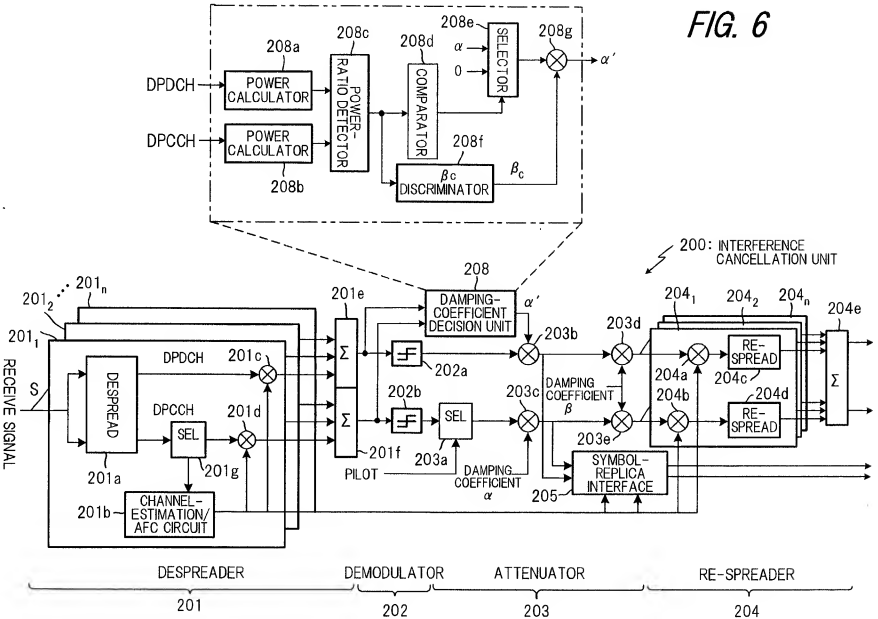
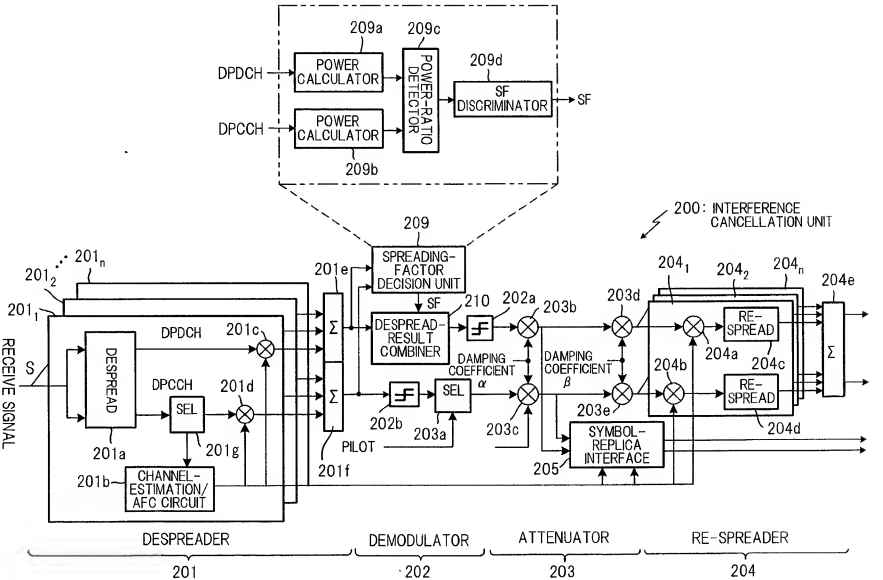

208
208a
208b
208c
208d
208e
208f
208g
DPDCH
DPCCH
POWER CALCULATOR
POWER CALCULATOR
POWER-RATIO DETECTOR
COMPARATOR
SELECTOR
DISCRIMINATOR
α
0
α'
βc
βc
200: INTERFERENCE CANCELLATION UNIT
DAMPING-COEFFICIENT DECISION UNIT
RECEIVE SIGNAL
S
DESPREAD
DPDCH
DPCCH
SEL
CHANNEL-ESTIMATION/AFC CIRCUIT
PILOT
DAMPING COEFFICIENT α
DAMPING COEFFICIENT β
SYMBOL-REPLICA INTERFACE
RE-SPREAD
RE-SPREAD
DESPREADER
DEMODULATOR
ATTENUATOR
RE-SPREADER
201
202
203
204

FIG. 7


209a
209c
DPDCH
POWER CALCULATOR
POWER-RATIO DETECTOR
209d
SF DISCRIMINATOR
SF
DPCCH
POWER CALCULATOR
209b
209
200: INTERFERENCE CANCELLATION UNIT
SPREADING-FACTOR DECISION UNIT
SF
210
DESPREAD-RESULT COMBINER
DAMPING COEFFICIENT α
DAMPING COEFFICIENT β
SEL
RE-SPREAD
SYMBOL-REPLICA INTERFACE
RECEIVE SIGNAL
S
DESPREAD
SEL
CHANNEL-ESTIMATION/AFC CIRCUIT
PILOT
DESPREADER
DEMODULATOR
ATTENUATOR
RE-SPREADER
201
202
203
204

TOSZZT 95TEOOT

FIG. 8

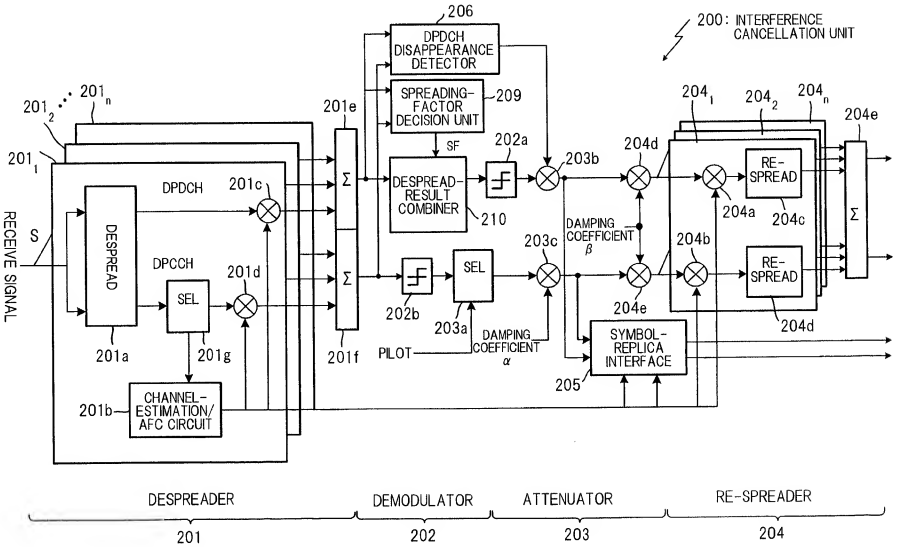
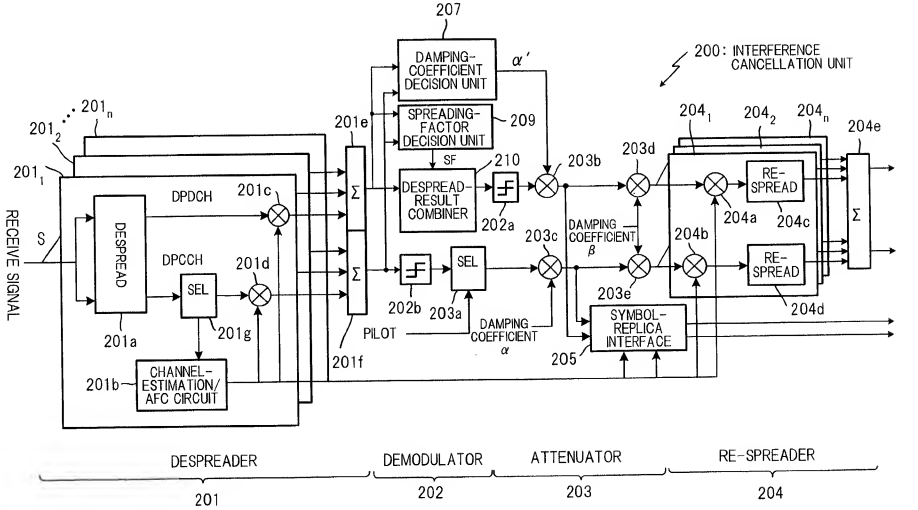


FIG. 9


207
DAMPING-COEFFICIENT DECISION UNIT
α'
200: INTERFERENCE CANCELLATION UNIT
SPREADING-FACTOR DECISION UNIT
209
201n
201e
204n
204e
SF
210
203b
203d
201c
DESPREAD-RESULT COMBINER
RE-SPREAD
DPDCH
RECEIVE SIGNAL
S
DESPREAD
DPCCH
SEL
201d
202a
DAMPING COEFFICIENT β
203c
204a
204c
204b
202b
203a
SEL
RE-SPREAD
203e
201g
PILOT
DAMPING COEFFICIENT α
SYMBOL-REPLICA INTERFACE
204d
201a
201f
205
201b
CHANNEL-ESTIMATION/AFC CIRCUIT
DESPREADER
DEMODULATOR
ATTENUATOR
RE-SPREADER
201
202
203
204

TO822T'96TE80T

FIG. 10 PRIOR ART

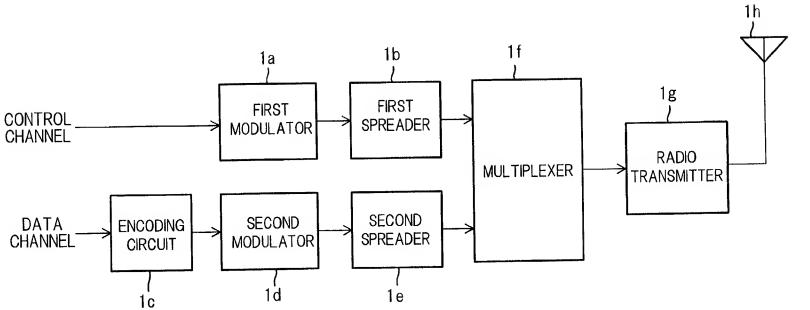
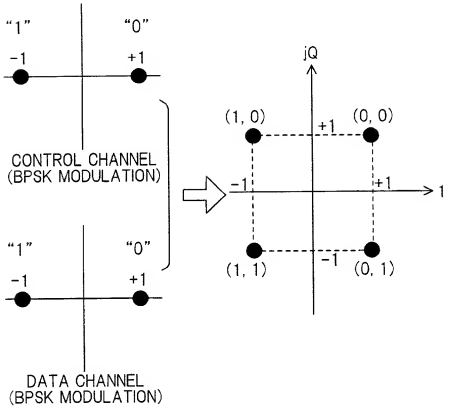


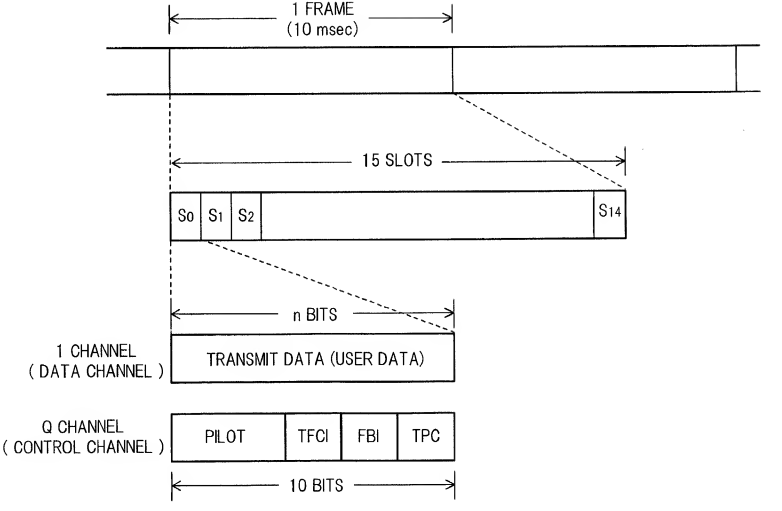
FIG. 11 PRIOR ART



1022141-20220214

T0822T 96TEC00T

FIG. 12 PRIOR ART



T0822T' 96TEC00T

FIG. 13 PRIOR ART

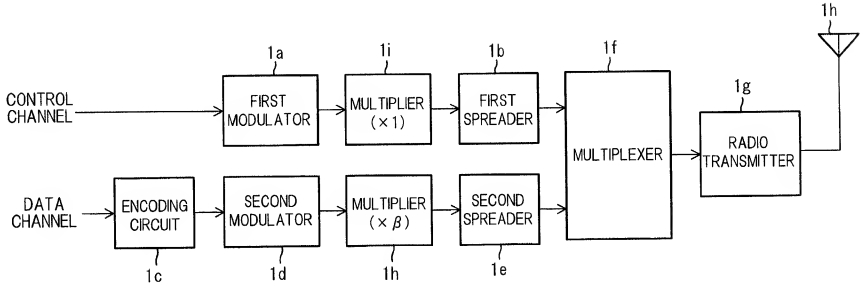


FIG. 14A PRIOR ART

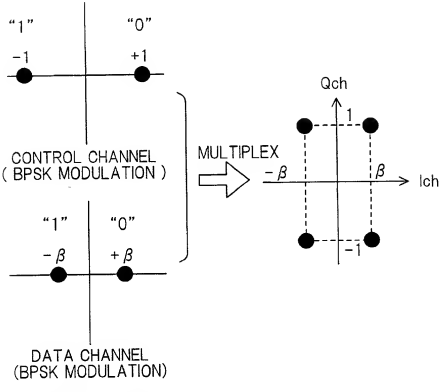


FIG. 14B PRIOR ART

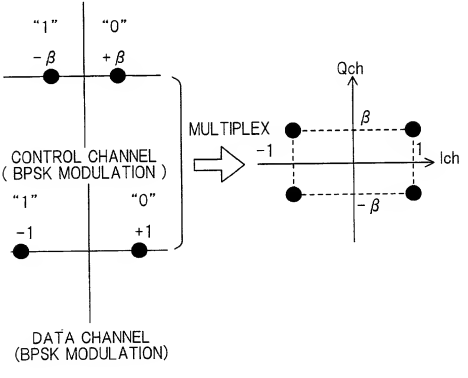


FIG. 15 PRIOR ART

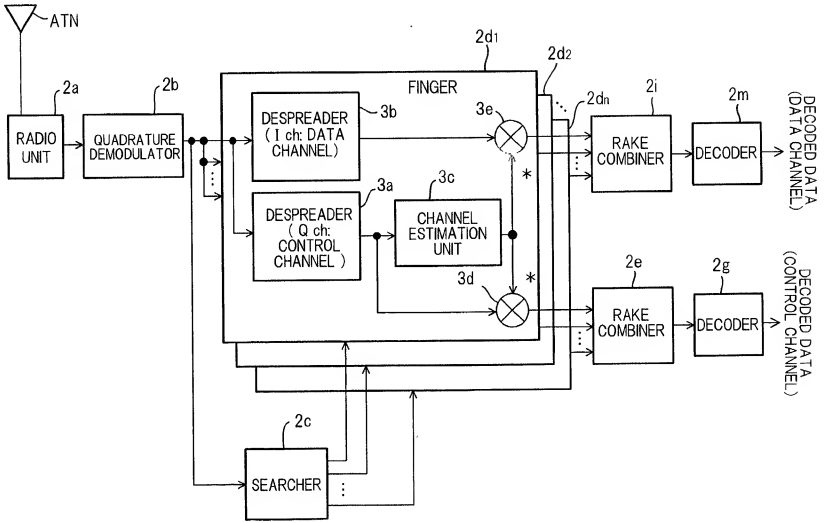
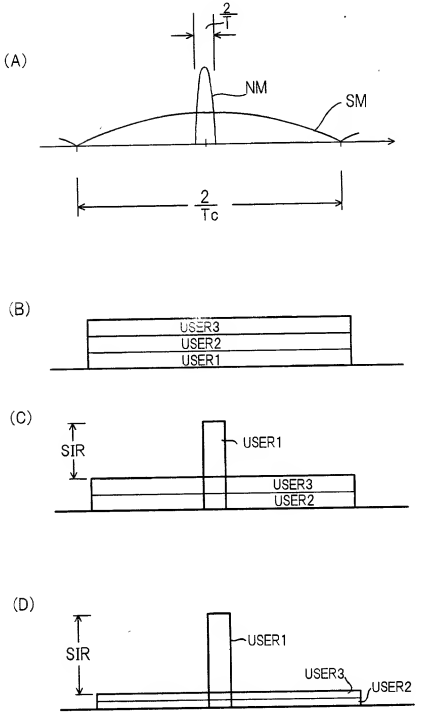


FIG. 16 PRIOR ART



T08221 96TEE0DT

FIG. 17 PRIOR ART

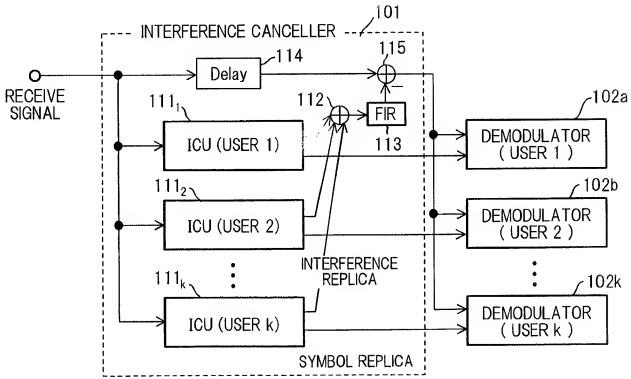


FIG. 18 PRIOR ART

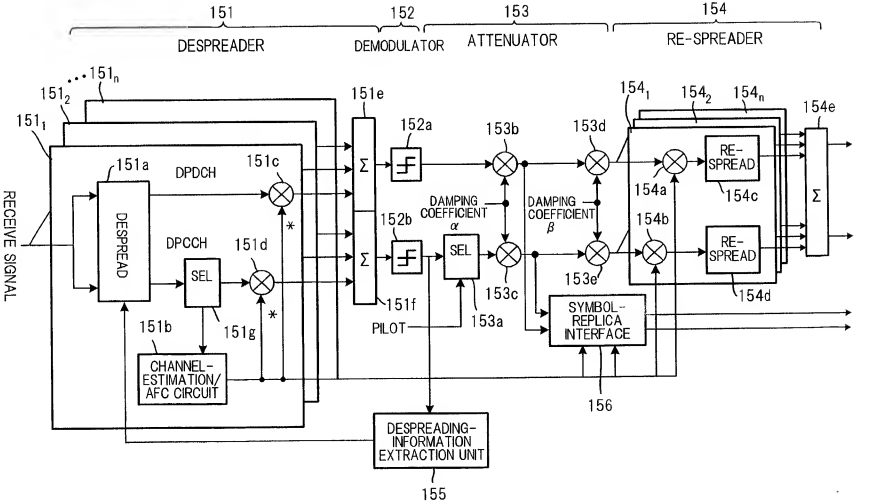


FIG. 19 PRIOR ART

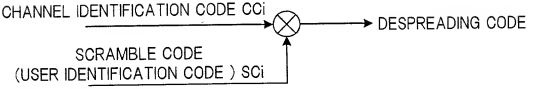


FIG. 20A PRIOR ART

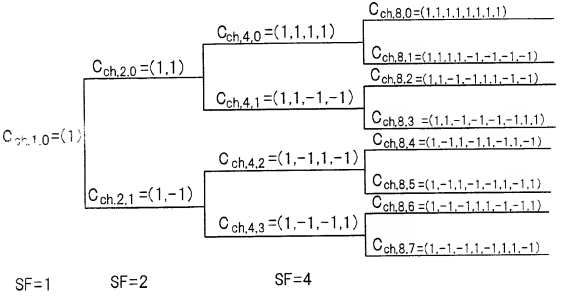


FIG. 20B PRIOR ART

$$C_{ch,1,0}=1$$

$$\begin{bmatrix} C_{ch,2,0} \\ C_{ch,2,1} \end{bmatrix} = \begin{bmatrix} C_{ch,1,0} & C_{ch,1,0} \\ C_{ch,1,0} & -C_{ch,1,0} \end{bmatrix} = \begin{bmatrix} 1 & 1 \\ 1 & -1 \end{bmatrix}$$

$$\begin{bmatrix} C_{ch,2(n+1),0} \\ C_{ch,2(n+1),1} \\ C_{ch,2(n+1),2} \\ C_{ch,2(n+1),3} \\ \vdots \\ C_{ch,2(n+1),2(n+1)-2} \\ C_{ch,2(n+1),2(n+1)-1} \end{bmatrix} = \begin{bmatrix} C_{ch,2^n,0} & C_{ch,2^n,0} \\ C_{ch,2^n,0} & -C_{ch,2^n,0} \\ C_{ch,2^n,1} & C_{ch,2^n,1} \\ C_{ch,2^n,1} & -C_{ch,2^n,1} \\ \vdots & \vdots \\ C_{ch,2^n,2^n-1} & C_{ch,2^n,2^n-1} \\ C_{ch,2^n,2^n-1} & -C_{ch,2^n,2^n-1} \end{bmatrix}$$

FIG. 21 PRIOR ART

FOR SPREADING FACTOR SF (=16)

SYMBOL DATA	Data1	Data2
CHANNEL IDENTIFICATION CODE	"0011001100110011"	"0011001100110011"

FOR SPREADING FACTOR SF_{min} (=4)

SYMBOL DATA	Data1	Data2	Data3	Data4	Data5	Data6	Data7	Data8
CHANNEL IDENTIFICATION CODE	"0011"	"0011"	"0011"	"0011"	"0011"	"0011"	"0011"	"0011"

SF/SF_{min}

FIG. 22 PRIOR ART

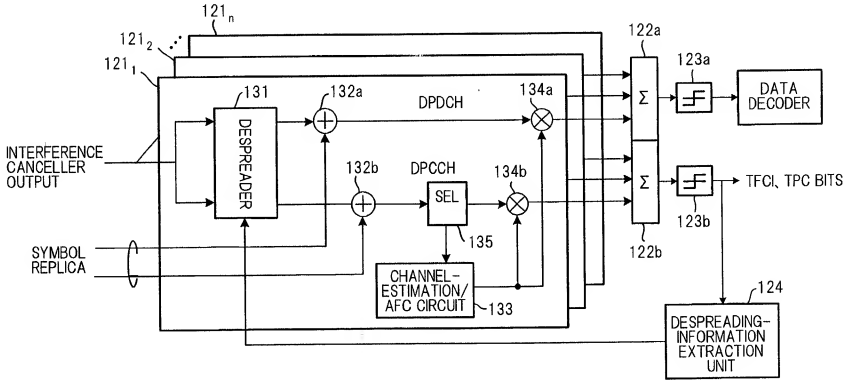


FIG. 23 PRIOR ART

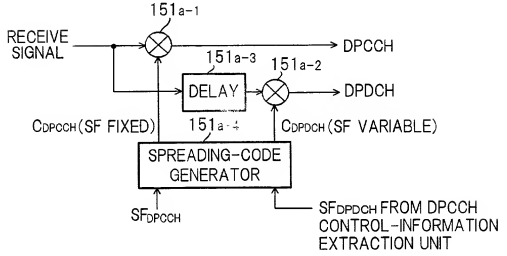
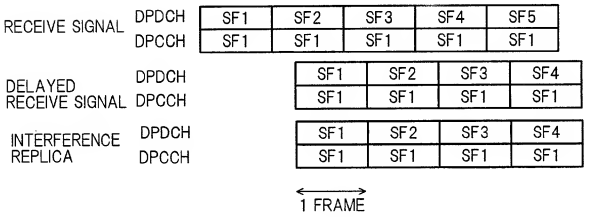



FIG. 24 PRIOR ART